



## INTELLIGENCE NOTE

14 October 2015

### (U//FOUO) Cyber: Hackers Likely To Increasingly Target Cloud Services

(U//FOUO) Online data storage continues to migrate from traditional “in-house storage” to cheaper cloud-based storage with Cloud Service Providers (CSP). California government agencies are increasingly turning to cloud-based solutions for their data storage needs.

(U//FOUO) **We assess criminal hackers’ compromise of CSP data probably will increase as the private and commercial data storage industry continues to grow. While CSPs are improving their security measures, criminal hackers continue to develop new tactics to attempt to compromise them.**

- (U//FOUO) The cloud is one of the largest shifts in information technology throughout the past decade, powering many businesses and mission-critical applications. Cloud computing managing company Right Scale<sup>USPER</sup> reports that 93 percent of organizations are using a CSP,<sup>1</sup> according to a 2015 survey of 930 IT professionals from organizations of varying sizes across many industries.
- (U//FOUO) US IT networking company Cisco<sup>USPER</sup> estimates that by 2018, approximately 50 percent of Internet users will use CSPs to store data—a 32 percent increase from the company’s 2013 estimate.<sup>2</sup>

(U//FOUO) **Criminal hackers have demonstrated their ability to circumvent some escalated CSP security measures like multiple authentication options, and may continue to do so by targeting unsuspecting users.**

- (U//FOUO) Hackers in 2014 used commercial law enforcement software to exploit a flaw in Apple’s<sup>USPER</sup> iCloud user authentication system and released sensitive data of celebrities.<sup>3,4</sup> Apple implemented two-factor authentication for iCloud and alerted users to login attempts from unknown devices.<sup>5</sup>
- (U//FOUO) Hackers may seek to manipulate unsuspecting employees with access to sensitive personally identifiable information through *Social Engineering* to compromise enough of a target’s services to defeat multi-factor authentication. *Social Engineering* involves an attacker using human interaction to obtain or compromise information about an individual, organization or system.
- (U//FOUO) Hackers may also seek to use malicious URLs or *Spoof* CSP login sites to compromise user accounts.

#### (U) The Cloud & Common Risks

(U//FOUO) Cloud computing provides users with a cheaper, more flexible and less cumbersome alternative to traditional computing without compromising users’ access to applications and computing infrastructure assets, such as data storage and processing. IT staff should consider the following:

- (U//FOUO) Think through your organization’s data handling requirements when choosing a CSP. Many currently or will soon offer storage that is compliant with standards like Health Insurance Portability and Accountability Act (HIPPA) and Criminal Justice Information Services (CJIS).
- (U//FOUO) Data in CSPs may transmit through or get stored in foreign government servers and could potentially become accessible to that foreign government without US oversight.
- (U//FOUO) Users may forfeit ownership of data in a CSP depending on the CSP’s privacy and sharing policies.

**(U) ADMINISTRATIVE NOTE**

(U) For comments or questions related to the content or dissemination of this document, please contact the STAC at (916) 874-1100 or [STAC@caloes.ca.gov](mailto:STAC@caloes.ca.gov).

**(U) TRACKED BY**

(U) HSEC 1.1; HSEC 1.4; HSEC 1.6; HSEC 1.8; HSEC 1.9

**(U) FEEDBACK**

(U) The STAC encourages your feedback using the survey found at <https://www.surveymonkey.com/r/R52S2J3>

**(U) ENDNOTES**

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1 (U) Online Survey; *Right Scale*; "Cloud Computing Trends: 2015 State of the Cloud Survey;" 18 February 2015; <http://www.rightscale.com/blog/cloud-industry-insights/cloud-computing-trends-2015-state-cloud-survey>; Accessed on 30 September 2015.

<sup>2</sup> (U) White Paper; *Cisco*; "Cisco Global Cloud Index; Forecast and Methodology 2013-2018 White Paper;" 2013; [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud\\_Index\\_White\\_Paper.html](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/global-cloud-index-gci/Cloud_Index_White_Paper.html); accessed on 24 August 2015.

3 (U) Online Article; *The Verge*; "Hack Leaks Hundreds of Nude Celebrity Photos;" 2014; <http://www.theverge.com/2014/9/1/6092089/nude-celebrity-hack>; Accessed on 26 August 2015.

4 (U) Online Article; *Wired*; "The Police Tool That Pervs Use To Steal Nude Pics From Apple's iCloud;" 2014; <http://www.wired.com/2014/09/eppb-icloud/>; Accessed on 26 August 2015.

5 (U) Online Article; *BBC News*; "Apple Toughens iCloud Security After Celebrity Breach;" 2014; <http://www.bbc.com/news/technology-29237469>; Accessed on 26 August 2015.